AMPROBE®

Data Sheet

38XR-A
Digital Multimeter

True RMS digital multimeter with optical PC interface for engineers designing and troubleshooting industrial automation and control systems.

- **Frequency to 10 MHz, capacitance to 400 uF, temperature to 2372 °F**
- **Duty cycle, dBm and 4 to 20 mA loop current test**
- **1000 V/750 V DC/AC True RMS, AC + DC input**
- **10 Amps AC/DC, fully safety fused**
- **Resistance to 40 MΩ**
- **Continuity beeper**
- **Min/Max, Average, Relative, Peak, and Data Hold**
- **Bright blue backlight**
- **Auto power off to save battery life**
- **Separate door for easy battery and fuse access**
- **Magne-Grip™ Holster with magnetic hanging strap**
- **CAT IV 600V rated**
- **Three-year warranty**

38XR-A

No hassle warranty

No waiting.

No shipping charges.

Our commitment to high-quality products and customer service is demonstrated by our industry exclusive "No Hassle" warranty. In the unlikely event that an Amprobe Test Tool requires warranty service, any of our local dealers are authorized to replace it, on the spot.

(note: $500 MSLP limit)

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Tel: 602-795-4033, Fax: 602-795-4624

CAT III 1000V CAT IV 600V N10140 CLASSIFIED UL In accordance with IEC publication 1010-1 54CJ

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General Specifications

Autoranging	
Display:	4-3/4 digit LCD, 10,000 counts with 41-segment analog bar graph
Display Update Rate:	2/sec, nominal
Power Battery:	9 V NEDA 1604, JIS 006P, IEC 6F22
Battery Life:	150 hrs typical (alkaline) frequent use of backlight will decrease battery life; Operating Temperature: 0 °C to 45 °C at < 70% R.H.
Storage Temperature:	-20 °C to 60 °C, 0 to 80 % R.H. with battery removed from meter
Temperature Coefficient:	0.1 x (specified accuracy) per °C (0 °C to 18 °C , 28 °C to 45 °C)
Altitude:	2000 m (6562 ft)
Dimensions:	196mm x 96mm x 60 mm (7.8" x 3.55" x 2.4")
Weight:	400 gr (1 lb) without holster, including battery

Specifications (23 °C ± 5 °C, <75 % R.H. non-condensing)

Function	Range	Accuracy
DC Voltage		
Ranges	1000 mV, 10 V, 100 V, 1000 V	± (0.25 % rdg + 5 dgt)
Resolution	100 µV	
AC Voltage (45 Hz to 2 kHz) True RMS		
Ranges	1000 mV, 10 V, 100 V, 750 V	
Accuracy	750 V range:	45 to 1 kHz: ± (2.0 % rdg + 10 dgts)
	All other ranges, 45 to 500 Hz:	± (1.2 % rdg + 10 dgts)
	All other ranges, 500 to 2 kHz:	± (2.0 % rdg + 10 dgts)
AC coupled True RMS specified from 5% to 100 % of range		
AC + DC Voltage (45 Hz to 2 kHz)		
Ranges	1000 mV, 10 V, 100 V, 750 V	
Accuracy	750 V range: 45 to 1 kHz:	± (2.5 % rdg + 10 dgts)
	All other ranges, 45 to 500 Hz:	± (1.5 % rdg + 10 dgts)
	All other ranges, 500 to 2 kHz:	± (2.5 % rdg + 10 dgts)
Resolution	100 µV	
DC coupled True RMS specified from 5 % to 100 % of range		
DC Current		
Ranges	100 µA, 1000 uA, 10 mA, 100 mA, 400 mA, 10 A	
	Accuracy 100 µA range:	± (0.5 % rdg + 10 dgt)
	1000 uA to 400 mA ranges:	± (0.5 % rdg + 5 dgts)
	10 A range:	±(1.5 % rdg + 10 dgt)
Resolution	0.01 µA	
AC Current (True RMS) (AC + DC) (45 Hz – 1kHz)		
Ranges	100 µA, 1000 µA, 10 mA, 100 mA, 400 mA, 10 A	
Accuracy	100 µA to 100 mA ranges:	± (1.5 % rdg + 20 dgts)
	400 mA range:	± (2.0 % rdg + 10 dgts)
	10 A range:	± (2.5 % rdg + 20 dgts)
Resolution	0.01 µA	
AC coupled True RMS specified from 5 % to 100 % of range		
AC + DC Accuracy	**100 µA to 400 mA ranges:**	± (2.0 % rdg + 20 dgts)
	10 A range:	± (3.0 % rdg + 20 dgts)
AC + DC: AC coupled True RMS specified from 10 % to 100 % of range		
Resistance		
Ranges	1000 Ω, 10 kΩ, 100 kΩ, 1000 kΩ, 10 MΩ, 40 MΩ	
Accuracy	1000 Ω to 1000 kΩ ranges:	± (0.5 % rdg + 8 dgts)
	10 MΩ range:	± (1.0 % rdg + 10 dgts)
	40 MΩ range:	± (2.0 % rdg + 10 dgts)
Resolution	100 mΩ	

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Specifications (23 °C ± 5 °C, <75 % R.H. non-condensing), cont.

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Function	Range	Accuracy
Capacitance		
Ranges	40 nF, 400 nF, 4 µF, 40 µF, 400 µF	
Accuracy	40 nF, 400 µF ranges:	± (3.0 % rdg + 10 dgts)
	400 nF to 40 µF ranges:	± (3.0 % rdg + 5 dgts)
Resolution	0.01 nF	
Temperature		
Ranges	-20 °C to 1300 °C, -4 °F to 2372 °F	
Accuracy	-20 °C to 10 °C:	± (2.0 % rdg + 4 °C)
	10 °C to 200 °C:	± (1.0 % rdg + 3 °C)
	200 °C to 1300 °C:	± (2.0 % rdg + 2 °C)
	-4 °F to 50 °F:	± (2.0 % rdg + 8 °F)
	50 °F to 400 °F:	± (1.0 % rdg + 6 °F)
	400 °F to 2372 °F:	± (2.0 % rdg + 4 °F)
Resolution	1 °C, 1 °F	
Frequency		
Ranges	100 Hz, 1000 Hz, 10 kHz, 100 kHz, 1000 kHz, 10 MHz	± (0.1% rdg + 5 dgts)
Resolution	0.01 Hz	
Duty Cycle		
Ranges	0 to 90 %	
Accuracy	5 V logic:	± (2.0% rdg + 10 dgts)
Resolution	0.01 %	
Frequency Range	0 % to 10 %: 40 Hz to 990 Hz	
	10 % to 90 %: 40 Hz to 20 kHz	
4 - 20 mA DC Current Test		
Range	0 – 100 %	± (0.5 % + 5 dgts)
Resolution	0.01 %	
dBm		
Ranges	-13 dBm to + 50 dBm	
Accuracy	45 Hz to 5 kHz: ± (0.7 dB + 8 dgts)	
	5 kHz to 10 kHz: ± (2.5 dB + 8 dgts)	
Resolution	0.01 dBm	
Continuity		
Audible Indication	< 40 Ω	
Diode Test		
Test Current	0.5 mA (approximate)	
Open Circuit Volts	3.0 V DC typical	
Peak		
AC Volts Accuracy	100 V, 750 V ranges:	± (3.0 + 200 dgts)
AC Current	1000 mV, 10 V ranges: unspecified	± (3.0 + 200 dgts)
Overload Protection		
AC/DC Voltage	1000 V DC or 750 V AC RMS	
AC/DC Current	µA/mA input: F0.5 A /1000 V fast-blow ceramic 6.3 x 32 mm	
	10A input: F10 A /1000V fast-blow ceramic 10 x 38 mm	

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Included Accessories
Test leads with threaded alligator clips (TL36A), temperature adaptor (TA-1), Type K thermo-couple probe (TP255A), 9 V battery (installed), Magne-Grip™ Holster with magnetic hanging strap, spare fuse, users manual

Optional Accessories

VC221B	Padded Vinyl Carry Case
DL248D	Deluxe Test Lead Kit
DC207C	Heavy Duty Case
HV231-10A	High Voltage Probe
TP254A	High Temperature Probe
38-SWA	RS232 Cable and Software

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